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**THE USE OF ACCELERATED METHODS OF LABORATORY  
DIAGNOSIS OF DYSENTERY (PHAGE TITER INCREASE REACTION  
AND THE METHOD OF FLUORESCENT ANTIBODIES)**

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1 July 1968

AD 672725

TRANSLATION NO. 1199

DATE: 1 July 1968

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AUG 7 1968

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THE USE OF ACCELERATED METHODS OF LABORATORY  
DIAGNOSIS OF DYSENTERY (PHAGE TITER INCREASE  
REACTION AND THE METHOD OF FLUORESCENT ANTIBODIES)

Following is a translation of an article by  
Ye. N. Kulikova, Ye. I. Vayman, Yu. T. Kuz'mina,  
L. L. Blinova and A. D. Suvorkova in the Russian  
language periodical Zhurnal mikrobiologii, epidemi-  
ologii i immunobiologii (Journal of Microbiology,  
Epidemiology and Immunobiology), Vol 34, No 6, 1963,  
page 131.

(From the Kazan' Institute of Epidemiology, Microbiology  
and Hygiene, Polyclinic No 2, Kazan')

A comparative study has been made of the accelerated  
methods of laboratory diagnosis of dysentery -- phage titer  
increase, fluorescent antibody method with parallel use of  
the bacteriological method.

The specificity of indicator bacteriophages was tested  
on 49 museum /stock/ and fresh cultures of the bacillus coli  
family, and of luminescent sera on 122 such cultures. As a  
control similar tests were run on typhoid fever patients and  
individuals in whom dysentery bacteria were isolated (N'yuk-  
kestl, Boyd-Novgorodskoy) and salmonellae. These studies  
established the specificity of bacteriophages and luminescent  
sera used in the investigation.

A total of 159 individuals were examined, 138 of whom  
were patients with gastro-intestinal diseases, and 21 of whom  
were included due to epidemic indications and for prophylactic  
purposes. Dysenteric bacteriophages and luminescent sera of  
Flexner and Sonne were used in the investigation (the 12  
individuals in whom N'yukestl and Boyd-Novgorodskoy dysentery  
cultures were isolated are not included).

The results showed that the phage titer increase reaction and the method of fluorescent antibodies are more sensitive than the bacteriological method and that the results are obtained within a shorter length of time.

The disadvantage of the phage titer increase reaction is that there is a considerable number of phage-resistant strains among the fresh cultures, as well as the complexity of running this test. Investigations have been conducted for the purpose of simplifying this reaction. The excretions from 255 patients were first divided into two parts: one part was examined by the usual method (with preliminary suspension and using a shyuttel device /shaker?/) and the other was mixed with beads then inoculated. The results were the same in 90percent of the cases.

In order to adopt the phage titer increase reaction and the fluorescent antibody method in laboratory practise it is necessary that there be a centralized supply of standard stock luminescent sera and indicator bacteriophages.

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